

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 21754

Received at London Office

26 JAN 1936

Date of writing Report 27th Dec 1935 When handed in at Local Office

Port of HAMBURG

No. in Survey held at AUGSBURG & HAMBURG

Date, First Survey 26th Jan. 35 Last Survey 23rd Dec. 1935

Number of Visits 98 Augsburg + 23 Hamburg.

Reg. Book.

on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel

"ANNELESE ESSBERGER"

Tons ^{Gross} 5173 ^{Net} 3052.

Built at HAMBURG

By whom built DEUTSCHE WERFT A.G. Yard No. 164 When built 1935

Engines made at AUGSBURG

By whom made MASCH. F. AUGSBURG, NURNBERG Engine No. 621000/010 When made 1935

Donkey Boilers made at

By whom made

Boiler No. — When made —

Brake Horse Power 2 x 2000

Owners ATLANTIC-TANK-REHDEREIG. M.B.H. Port belonging to HAMBURG.

Nom. Horse Power as per Rule 885

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES.

Trade for which vessel is intended

OCEAN GOING TRAMP. 20th 27th 16

OIL ENGINES, &c. — Type of Engines N.A.V. 3. 62V 52/70 2 or 4 stroke cycle 2. Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 1520 mm. Length of stroke 700 mm. No. of cylinders 2 x 6. No. of cranks 2 x 6.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 680 mm. Is there a bearing between each crank: YES

Revolutions per minute 225 Flywheel dia. 1700 mm. Weight 1210 Kgr Means of ignition dir. injel. Kind of fuel used Diesel oil.

Crank Shaft, dia. of journals as per Rule appr. 320 mm. Crank pin dia. 320 mm. Crank Webs Mid. length breadth 520 mm. Thickness parallel to axis shrunk Thickness around eye-hole —

Flywheel Shaft, diameter as per Rule — Intermediate Shafts, diameter as per Rule appr. 355 mm. Thrust Shaft, diameter at collars as per Rule 380 mm (100% bore) YES

Tube Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule appr. 414 mm. Is the tube screw shaft fitted with a continuous liner YES

Bronze Liners, thickness in way of bushes as per Rule appr. 23.5 mm. Thickness between bushes as per rule appr. 18 mm. Is the after end of the liner made watertight in the propeller boss YES

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive —

If two liners are fitted, is the shaft lapped or protected between the liners — Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft —

Propeller, dia. 5500 mm Pitch 4200 mm. No. of blades 4 Material Bronze whether Moveable NO. Total Developed Surface 9,356 sq. mm

Method of reversing Engines direct. Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication forced.

Thickness of cylinder liners 35 mm. Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Tunnel

Cooling Water Pumps, No. 2. Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

What special arrangements are made for dealing with cooling water if discharged into bilges lead over board.

Bilge Pumps worked from the Main Engines, No. 20. Diameter 146 mm. Stroke 180 mm. Can one be overhauled while the other is at work YES

Pumps connected to the Main Bilge Line No. and Size 2. 15 ton/h. each. How driven 1. self priming rotary type. 100 ton/h. 2. electric driven.

Ballast Pumps, No. and size 1. rotary type 100 ton/h. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3. 1. 100 ton/h. 2. 60 ton/h. 3. 60 ton/h.

Are two independent means arranged for circulating water through the Oil Cooler YES

Pumps, No. and size: — In Machinery Spaces 5. 1 of 90 mm. 1 of 90 mm. From Tunnel well - 1 of 90 mm. From offset. 1 of 180 mm. In Pump Room —

In Holds, &c. From Foreship 6 of 90 mm. in diam. - From Aft. ship - 4 of 90 mm. From Forepeak 1 of 90 mm. - From Aft. Peak 1 of 90 mm. in diam.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2. - 1 of 180 mm. - 1 of 125 mm. in diam.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks bilge lines to Foreship Have they been tested as per Rule YES

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another YES

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES

Main Air Compressors, No. 2 No. of stages 2 Diameters 250-100 mm. Stroke 220 mm. Driven by Diesel Engine.

Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 110-45 mm. Stroke 70 mm. Driven by hand.

Scavenging Air Pumps, No. 2 x 1. root blow 2600 mm. Diameter — Stroke — Driven by

Auxiliary Engines crank shafts, diameter as per Rule appr. 130 mm. Position —

AIR RECEIVERS: — Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES

Can the internal surfaces of the receivers be examined and cleaned YES

STARTING Air Receivers, No. 1 Cubic capacity of each 30 ton Internal diameter 193 mm. Thickness 6 mm.

Seamless, lap welded or riveted longitudinal joint caulkin Material S.M. Steel. Range of tensile strength 60.6 kg/cm² Working pressure by Rules 30 kg/cm² (426 lb/sq. in.)

Starting Air Receivers, No. 2 Total cubic capacity 2 x 10 m³ Internal diameter 1550 mm. Thickness 21 mm.

Seamless, lap welded or riveted longitudinal joint riveted. Material S.M. Steel. Range of tensile strength 44-55 kg/cm² Working pressure by Rules 25 kg/cm² (362 lb/sq. in.)

W1349-0201

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only?

PLANS. Are approved plans forwarded herewith for Shaffling

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Receivers

Separate Tanks

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

DESCRIPTION OF S.R. GEAR.

Two 2SCSA Oil Engines acting upon 1 Screw Shaft by means of a S.R. Gear. "Jibby" Couplings are fitted between crankshafts and pinions. Revolutions per minute at full power of Oil Engines: 225. - main shaft: 94. - Pitch Circle Diameter Pinion: 828.826 in. - main wheel: 1984.511 in. - Width of Face: main wheel: 2 x 350 in. - Distance between centres of pinion and wheel faces and the centre of the adjacent bearings: Pinion - 720 in. Fore & aft. Main Wheel 720 in. Fore - 820 in. aft. Diam. at Bearings: Pinion: 320 in (100 in bore) main wheel shaft - 380 in (100 in bore) Diam. at wheel flange: Pinion: 655.43 in. main wheel 1840 in. 1 main lubricating Sp. driven by main wheel shaft (forward end) and 1 spare lub. pump. electric driven.

The foregoing is a correct description.

DEUTSCHE WERFT
AGTIENGESELLSCHAFT

Manufacturer.

Dates of Survey while building: During progress of work in shops - Oct. 1. 7. 22. During erection on board vessel - Oct. 23-29. Nov. 6-9-12-17-22. Dec. 3-5-9-12-14-17-19-23. Total No. of visits: Hamburg. 23.

Dates of Examination of principal parts - Cylinder: See Aug. 1935. Covers: ditto. Pistons: ditto. Rods: - Connecting rods: ditto. Crank shaft: ditto. Flywheel shaft: - Thrust shaft: See Dec. 1935. Intermediate shafts: 1/10-29/12/35. Tube shaft: - Screw shaft: 1/10/35. Propeller: 24/9-14/12/35. Stern tube: 1/10/35. Engine seatings: 6/11-9/11-13/11/35. Engines holding down bolts: 6/11-9/11-12/11/35. Completion of fitting sea connections: 14/12/35. Completion of pumping arrangements: 17/12/35. Engines tried under working conditions: 19/12-23/12/35.

Crank shaft, Material S.M. Steel. Identification Mark 4696-J.Q. 16.3.35. MAIN WHEEL Identification Mark 4671-J.Q. 26.2.35. Flywheel shaft, Material S.M. Steel. Identification Mark 11357-M.B. 31.7.35. Thrust shaft, Material S.M. Steel. Identification Mark 11270-M.B. 4.7.35. Intermediate shafts, Material S.M. Steel. Identification Marks J.L. 21.9.35. Pinion shaft, Material S.M. Steel. Identification Mark 15929-K.F. 22.7.35. Screw shaft, Material S.M. Steel. Identification Mark 9057-J.L. 17.8.35. Spare 9058-J.L. 17.8.35.

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Oil Engines have been built at Augsburg and the S.R. Gear at Duisburg under Special Survey of the Society's Surveyors. Material and workmanship of this machinery are of good quality and the outfit is ample. It has been fitted under Special Survey here at Hamburg in accordance with the approved plans - the Secretary's Letter and otherwise in conformity with the requirements of the Rules. I attended for an 8 hours trial trip, when it has given full satisfaction under full working and manoeuvring conditions. This machinery is eligible in my opinion to be classed in the Society's Reg. of S. with notation "2- L.M.C. - 12.35" OIL-ENG. - S.R. and T.St. - CL.

The amount of Entry Fee

£ 2: -

When applied for,

Special

£ 39: -

19

Donkey Boiler Fee

£ 13: 15/-

When received,

Travelling Expenses (if any)

£ 2: 10/-

23-3 19 36 24/3

Committee's Minute

WED. 29 JAN 1936

TUE. 10 MAR 1936

Assigned

+ dmt. 12 35

Friedrich H. H.

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation